ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

SIGNIFICANT PERMIT REVISION DESCRIPTION

This significant permit revision is for Arizona Portland Cement Company, the Permittee, for operation of its Twin Peaks Rock and Stone facility adjacent to its Portland cement plant in Rillito, Pima County, Arizona.

This significant revision incorporates the Twin Peaks Rock and Stone equipment into the cement plant operating permit.

Addenda (Significant Revision) #39066
to Operating Permit #M190310P1-00
for
Arizona Portland Cement Company

The permit conditions below shall be added to Operating Permit #M190310P1-00 as Attachment "D".

I. GENERAL REQUIREMENTS

A. *The Permittee shall not process more than 800,000 tons of rock in any rolling 12-month period*.
[A.A.C. R18-2-306.01.A and -331.A]
[Material permit conditions are indicated by underline and italics]

B. The Permittee shall keep records of the rolling 12-month total weight of rock processed. These records shall be made available to ADEQ upon request.
[A.A.C. R18-2-306.A.3.c]

C. Mobile sources and fugitive dust sources shall be subject to the requirements in Section II of Attachment "B" of this permit.
[A.A.C. R18-2-Articles 6 and 8]

D. *The Permittee shall install*, calibrate, maintain, and operate a *monitoring device which can be used to determine daily the process weight of sand, gravel or crushed stone produced*.
[A.A.C. R18-2-306.A.3.d and -331.A.3.c]
[Material permit conditions are indicated by underline and italics]

II. CRUSHING AND SCREENING OPERATIONS - NSPS

A. Applicability

1. NSPS applicable crushing and screening equipment is defined as any combination of the following equipment that commenced construction, reconstruction, or modification after August 31, 1983, and with a capacity of 150 tph or greater:

   a. Crushers;

   b. Grinding mills;

c. Screening operations;

d. Bucket elevators;

e. Belt conveyors;

f. Bagging operations;

g. Storage bins;

h. Enclosed truck or railcar loading stations;

[40 CFR 60.670(a) and (e)]

B. Opacity

1. Emission Limitations/Standards

a. Crusher Operations

The Permittee shall not allow to be discharged into the atmosphere from any crusher, at which a capture system is not used, any process fugitive emissions which exhibit visible emissions greater than 15 percent opacity.

[40 CFR 60.672(c) and A.A.C. R18-2-331.A.3.f]
[Material permit conditions are indicated by underline and italics]

b. Screening, Conveyor, and Truck/Railcar Loading Operations

The Permittee shall not allow to be discharged into the atmosphere from any transfer point on belt conveyors or other affected facilities (except crushers) any fugitive emissions which exhibit visible emissions greater than 10 percent opacity.

[40 CFR 60.672(b) and A.A.C. R18-2-331.A.3.f]
[Material permit conditions are indicated by underline and italics]

2. Monitoring and Recordkeeping Requirements

a. For new affected facilities, the Permittee shall submit written reports of the results of all performance tests conducted to demonstrate initial compliance with the standards set forth in Condition II.B.1 above, including reports of opacity observations made using Method 9. New affected facilities are those that have not previously been permitted and operated in the State of Arizona.

[40 CFR 60.676(f)]

b. Beginning from the issuance of this permit revision, a certified Method 9 observer shall conduct a monthly visual survey of visible emissions from all affected facilities as listed in Condition II.A.1 above. The Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation.

[A.A.C. R18-2-306.A.3.c]

c. If the observer sees a plume that on an instantaneous basis appears to exceed the

applicable opacity standard, then the observer shall, if possible, take a six-minute EPA Method 9 observation of the plume.

[A.A.C. R18-2-306.A.3.c]

d. If the six-minute opacity of the plume is less than the applicable opacity standard, the observer shall make a record of the following:

i. Location, date, and time of the observation; and

ii. The results of the Method 9 observation.

[A.A.C. R18-2-306.A.3.c]

e. If the six-minute opacity of the plume exceeds the applicable opacity standard, then the Permittee shall do the following:

i. Adjust or repair the controls or equipment to reduce opacity to or below the applicable standard; and

ii. Report it as an excess emission for opacity.

[A.A.C. R18-2-306.A.3.c]

3. Initial Testing Requirements – New Affected Facilities Only

a. Conveyor Operation and Crushing and Screening Operations

i. For the purposes of determining initial compliance with the applicable opacity limits, the Permittee shall conduct or cause to be conducted the tests and procedures set forth in EPA Reference Method 9.

[40 CFR 60.11(b) and 675(b)(2)]

ii. When determining initial compliance with Condition II.B.1.b above, the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply:

[40 CFR 60.675(c)(3)]

(1) There are no individual readings greater than 10 percent opacity; and

[40 CFR 60.675(c)(3)(i)]

(2) There are no more than 3 readings of 10 percent for the 1-hour period.

[40 CFR 60.675(c)(3)(ii)]

iii. When determining initial compliance with Conditions II.B.1.a and II.B.1.b above, the following conditions apply:

(1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

[40 CFR 60.675(c)(1)(i)]

(2) The observer, when possible, shall select a position that minimizes interference from other fugitive emission sources. The required observer position relative to the sun (Method 9, Section 2.1) must be observed.

[40 CFR 60.675(c)(1)(ii)]

(3) When using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

[40 CFR 60.675(c)(1)(iii)]

iv. When determining initial compliance with Condition II.B.1.a above, the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply:

[40 CFR 60.675(c)(4)]

(1) There are no individual readings greater than 15 percent opacity; and

(2) There are no more than 3 readings of 15 percent for the 1-hour period.

b. Wet Screening Operations

Initial Method 9 performance tests are not required for:

i. Wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to, but not including the next crusher, grinding mill or storage bin.

[40 CFR 60.675(h)(1)]

ii. Screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, that process saturated materials up to the first crusher, grinding mill, or storage bin in the production line.

[40 CFR 60.675(h)(2)]

c. If emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

i. Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

[40 CFR 60.675(e)(1)(i)]

ii. Separate the emissions so that the opacity of emissions from each affected facility can be read.

[40 CFR 60.675(e)(1)(ii)]

4. Notification Requirements

a. The Permittee shall furnish to the Director and Administrator for all new affected facilities that were not previously permitted, a written notification as follows:

i. A notification of the date construction (or reconstruction as defined under 40 CFR §60.15 and §60.673) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.

[40 CFR 60.7(a)(1)]

ii. A notification of the actual date of initial startup of a permitted facility postmarked within 15 days after such date.

[40 CFR 60.7(a)(3)]

(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the Permittee. The notification shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.

[40 CFR 60.676(I)(1)]

(2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

[40 CFR 60.676(I)(2)]

b. The Permittee shall furnish to the Director and Administrator for any affected facility subject to this Section, a written notification as follows:

A notification of any physical or operational change to an affected facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Director or Administrator may request additional relevant information subsequent to this notice.

[40 CFR 60.7(a)(4)]

5. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with the following applicable requirements as of the issuance date of this permit: 40 CFR 60.670(a), 40 CFR 60.670(c), 40 CFR 60.670(e), 40 CFR 60.670(f), 40 CFR 60.672(b), 40 CFR 60.672(c), 40 CFR 60.672(d), 40 CFR 60.672(e), 40 CFR 60.672(g), 40 CFR 60.672(h), 40 CFR 60.674(a), 40 CFR 60.674(b), 40 CFR 60.675(a), 40 CFR 60.675(b)(2), 40 CFR 60.675(c)(1), (3) and (4), 40 CFR 60.675(e), 40 CFR 60.675(f), 40 CFR 60.675(h), 40 CFR 60.675(i), 40 CFR 60.676(a), 40 CFR 60.676(c), 40 CFR 60.676(d), 40 CFR 60.676(f), 40 CFR 60.676(g), 40 CFR 60.676(h), 40 CFR 60.676(h), and 40 CFR 60.676(i).

[A.A.C R18-2-325]

III. CRUSHING AND SCREENING OPERATIONS – NON-NSPS

A. Applicability

Non-NSPS crushing and screening facility is defined as any combination of the following equipment that was constructed on or before August 31, 1983:

1. Rock crushers;

2. Screens;

3. Conveyors and conveyor transfer points;

4. Stackers;

5. Auxiliary Lime Silos

6. Reclaimers;

7. All gravel or crushed stone processing plants;

As well as any portable sand and gravel plants and crushed stone plants with capacities less than 150 tons per hour.

B. Particulate Matter and Opacity

1. Emission Limits/Standards

a. The Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere, except as fugitive emissions, in any one hour from any gravel or crushed stone processing plant in total quantities in excess of the amounts calculated by one of the following equations:

i. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable particulate emissions shall be determined by the following equation:

$E = 3.59\ P^{0.62}$

Where:

E = the maximum allowable emissions rate in pounds-mass per hour.
P = the process weight rate in tons-mass per hour

[P.C.C. §§ 17.16.370.B.1]

ii. For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$E = 17.31\ P^{0.16}$

Where "E" and "P" are defined as in III.B.1.a(1) above.

[P.C.C. §§ 17.16.370.B.2]

2. Opacity

The Permittee shall not cause to be discharged into the atmosphere from any gravel or stone crushing processes any emissions greater than 20 percent.

[A.A.C. R18-2-702.B.1 and P.C.C. §§ 17.16.710]

3. Air Pollution Controls

a. *Water spray bars or equivalent control equipment shall be used on all crushers and screens whenever the equipment is operating or material must be adequately wet to minimize visible emissions to the extent practical*.

[A.A.C. R18-2-331.A.3.d and e, and 306.01]
[Material permit conditions are indicated by underline and italics]

b. Spray bar pollution control shall be utilized in accordance with "EPA Control of Air Emissions From Process Operations in the Rock Crushing Industry" (EPA 340/1-79-002), and "Wet Suppression System" (pages 15-34, amended as of January, 1979 (and no future amendments or editions)), as incorporated herein by reference and on file with the Office of the Secretary of State, with placement of spray bars and nozzles as required by the Director to minimize air pollution.

[A.A.C. R18-2-722.D]

c. Fugitive emissions from operation of gravel or crushed stone processing shall be controlled in accordance with Conditions II.B.1.a through f of Attachment "B" of Operating Permit M190310P1-00.

[A.A.C. R18-2-722.E]

4. Monitoring and Recordkeeping Requirements

a. Beginning from the issuance of this permit revision, a certified Method 9 observer shall conduct a monthly visual survey of visible emissions from all affected facilities as listed in Condition III.A above. The Permittee shall keep a record of

the name of the observer, the date on which the observation was made, and the results of the observation.

[A.A.C. R18-2-306.A.3.c]

b. If the observer sees a plume that on an instantaneous basis appears to exceed the applicable opacity standard, then the observer shall, if possible, take a six-minute EPA Method 9 observation of the plume.

[A.A.C. R18-2-306.A.3.c]

c. If the six-minute opacity of the plume is less than the applicable opacity standard, the observer shall make a record of the following:

i. Location, date, and time of the observation; and

ii. The results of the Method 9 observation.

[A.A.C. R18-2-306.A.3.c]

d. If the six-minute opacity of the plume exceeds the applicable opacity standard, then the Permittee shall do the following:

i. Adjust or repair the controls or equipment to reduce opacity to or below the applicable standard; and

ii. Report it as an excess emission for opacity.

[A.A.C. R18-2-306.A.3.c]

e. Periodic Monitoring Requirements

The Permittee shall install, calibrate, maintain, and operate *monitoring devices which can be used to determine daily the process weight of sand, gravel or crushed stone produced*. *The weighing devices shall have an accuracy of plus or minus 5 percent over their operating range*.

[A.A.C. R18-2-722.F and -331.A.3.c]
[Material permit conditions are indicated by underline and italics]

f. Recordkeeping Requirements

The Permittee shall maintain records of the daily production rate of gravel or crushed stone produced.

[A.A.C. R18-2-722.G and P.C.C. §§ 17.16.370.G]

5. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with the following applicable requirements as of the issuance date of this permit: A.A.C. R18-2-722.A, A.A.C. R18-2-722.B, A.A.C. R18-2-722.C, A.A.C. R18-2-722.D, A.A.C. R18-2-722.E, A.A.C. R18-2-722.F, A.A.C. R18-2-722.G, P.C.C. §§ 17.16.370.B.1, P.C.C. §§ 17.16.370.B.2, P.C.C. §§ 17.16.710, and P.C.C. §§ 17.16.370.G.

[A.A.C. R18-2-325]

IV. EQUIPMENT LIST

Equipment	Maximum Capacity	Make	Model	Serial No.	Equipment ID No.	Manufacture Date	NSPS Applicable?
Vibrating Grizzly Feeder	800 tph	Diester	5x22	64-177	F-2	1985	No
Jaw Crusher	450 tph	Kue Ken	34x42 Jaw	120S12857R	CR-3	1985	Yes
Belt Conveyor	800 tph	Spaulding	48x28	TR143-85-1338	C-4	1985	Yes
Belt Conveyor	800 tph	Spaulding	42x80	80x42T-85-1339	C-5	1985	Yes
Screen	800 tph	Diester	6x20 2 D	398592	S-6	1985	Yes
Conveyor	400 tph	Spaulding	36x18	TR144-85-1340	C-6	1985	Yes
Conveyor	400 tph	Spaulding	36x60	60x36T-85-1341	C-7	1985	Yes
Screen	400 tph	Diester	6x20 3 D	398593	S-11	1985	Yes
Screen	400 tph	Diester	6x20 3 D	398594	S-12	1985	Yes
Belt Conveyor	400 tph	Spaulding	36x18	TR145-85-1343	C-11	1985	Yes
Belt Conveyor	400 tph	Spaulding	36x18	TR145-85-1350	C-12	1985	Yes
Radial Stacker	400 tph	Spaulding	30x100RS	100x30T-85-1347	C-16	1985	Yes
Belt Conveyor	400 tph	Spaulding	24x54	78x24T-85-1353	C-21	1985	Yes
Radial Stacker	800 tph	Spaulding		100-36T-85-1359	C-22	1985	Yes

Equipment	Maximum Capacity	Make	Model	Serial No.	Equipment ID No.	Manufacture Date	NSPS Applicable?
Belt Conveyor	300 tph	N/A	30x30	N/A	C-26	1985	Yes
Belt Conveyor	400 tph	N/A	30x100	N/A	C-10	1985	Yes
Belt Conveyor	300 tph	N/A	30x60	N/A	C-13	1985	Yes
Belt Conveyor	300 tph	N/A	30x60	N/A	C-15	1985	Yes
Belt Conveyor	300 tph	N/A	30x60	N/A	C-27	1985	Yes
Belt Conveyor	400 tph	N/A	30x30	N/A	C-17	1985	Yes
Loader (Primary C&S)	N/A	Caterpillar	988	N/A	Loader	N/A	N/A
Loader (Secondary Screening)	N/A	Caterpillar	988	N/A	Loader	1985	N/A
Hopper	N/A	N/A	N/A	N/A	Hopper 1	1985	No
Hopper	N/A	N/A	N/A	N/A	Hopper 2	1985	No
Belt Conveyor	200 tph	Spaulding	24x37	33x24T-85-1359	Not Currently In Use	1985	Yes
Stacker	200 tph	Spaulding	24x100 FS	100x24T-85-1358	Not Currently In Use	1985	Yes
Portable Feeder Conveyor	200 tph	Helmick	30x68	4635-1330-60-83B	Not Currently In Use	1985	Yes
Portable Crushers (Maximum Qty: 3)	895 tph (combined)				See Note		Possible
Portable Screens (Maximum Qty: 4)	2,006 tph (combined)				See Note		Possible

Equipment	Maximum Capacity	Make	Model	Serial No.	Equipment ID No.	Manufacture Date	NSPS Applicable?
Portable Conveyors (Maximum Qty: 15)	4,483 tph (combined)				See Note		Possible

Note: Maximum permitted amount of portable equipment is listed. This equipment may be purchased or rented by the Permittee, and operated on-site.